



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,777	01/27/2004	Craig William Fellenstein	AUS920030962US1	2482

45327 7590 03/07/2007
IBM CORPORATION (CS)
C/O CARR LLP
670 FOUNDERS SQUARE
900 JACKSON STREET
DALLAS, TX 75202

EXAMINER

AHLUWALIA, NAVNEET K

ART UNIT	PAPER NUMBER
----------	--------------

2166

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/765,777	Applicant(s) FELLENSTEIN ET AL.	
	Examiner Navneet K. Ahluwalia	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10,11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,10,11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to the Amendment filed December 6, 2006.

Response to Arguments

2. Claims 1 – 8, 10, 11 and 13 are pending in this Office Action, claims 9 and 12 have been cancelled. After a further search and a thorough examination of the present application, claims 1 – 8, 10, 11 and 13 remain rejected.
3. Applicant's arguments filed with respect to claims 1 – 8, 10, 11 and 13 have been fully considered but they are not persuasive.

First, Applicant argues that there is no teaching in Jochemsen of individual clusters being moved or rearranged to for more contiguous units.

In response to Applicant's argument, the Examiner submits primarily moving or rearranging of individual clusters for more contiguous units is not in the claim. Furthermore Jochemsen discloses in column 4 lines 41 – 55 the fragmentation and the coalescing of and normalizing the clusters and files selected.

Second, Applicant argues that there is no teaching in Jochemsen of the agent being configured to operate while the system is at least idle.

In response to Applicant's argument, the Examiner submits that Jochemsen discloses in column 2 lines 1 – 10 and 58 – 67 and column 3 lines 23 – 45 the operation of the agent in the computer system irrespective of it being idle or non-idle. The

Art Unit: 2166

*argument is respectfully traversed as it requires the agent to operate **at least** when the system is idle which is clearly disclosed in Jochemsen.*

Other claims recite the same subject matter and for the same reasons as cited above the rejection is maintained.

Hence, Applicant's arguments do not distinguish the claimed invention over the prior art of record. In light of the foregoing arguments, the 102 rejections are sustained.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent; published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 8, 10, 11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Jochemsen et al. ('Jochemsen' herein after) (US 6,757,804 B2).

With respect to claim 1,

Jochemsen discloses an apparatus for file defragmentation of at least one storage medium, comprising:

Art Unit: 2166

- a computer system at least coupled to the at least one storage medium (column 1 lines 11 - 25, Jochemsen);
- a tracker, wherein the tracker is at least configured to maintain a record of at least locations of a plurality of file fragments on at least one storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen); and
- an agent, wherein the agent is at least: configured to operate while the computer system is at least idle (column 2 lines 58 – 67, Jochemsen); configured to defragment the plurality of file fragments (column 2 lines 1 – 10, Jochemsen); and configured to delete the record of at least locations of the plurality of file fragments (column 2 lines 58 – 67 and column 3 lines 23 – 45, Jochemsen).

With respect to claim 2,

Jochemsen discloses the apparatus of claim 1, wherein the agent further comprises at least having the ability to modify attributes of defragmentation (column 3 lines 37 – 46, Jochemsen).

With respect to claim 3,

Jochemsen discloses the apparatus of claim 2, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226

Art Unit: 2166

and 42 – 47, Jochemsen).

With respect to claim 4,

Jochemsen discloses the apparatus of claim 1 further comprising:

- a memory, wherein the memory is at least configured to store locations of a plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);
- a system monitor, wherein the system monitor at least determines if file fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage medium (column 2 lines 58 – 67, Jochemsen); and
- an accounting means, wherein the accounting means is at least configured to store locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred (column 3 lines 23 – 45, Jochemsen).

With respect to claim 5,

Jochemsen discloses an apparatus for file defragmentation of at least one storage medium at least coupled to a computer system, comprising:

- a memory, wherein the memory is at least configured to store locations of a plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

Art Unit: 2166

- an idle monitor, wherein the idle monitor is at least configured to enable defragmentation while the computer system is at least idle (column 2 lines 58 – 67, Jochemsen);
- a defragmenter, wherein the defragmenter is at least configured to defragment the plurality of file fragments (column 1 lines 49 – 53, Jochemsen); and
- an update monitor, wherein the update monitor is at least configured to delete a record in the memory of at least locations of the plurality of file fragments that at least been defragmented (column 3 lines 23 – 45, Jochemsen).

With respect to claim 6,

Jochemsen discloses the apparatus of claim 5, wherein the agent further comprises at least having the ability to modify attributes of defragmentation (column 3 lines 37 – 46, Jochemsen).

With respect to claim 7,

Jochemsen discloses the apparatus of claim 6, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226 and 42 – 47, Jochemsen).

With respect to claim 8,

Jochemsen discloses a method of for file defragmentation of at least one storage medium coupled to a computer system, comprising:

- determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);
- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 1 lines 49 – 58, Jochemsen); if the computer system is idle, defragmenting a file (column 2 lines 58 – 67, Jochemsen);
- determining if defragmentation is complete if defragmentation is complete, deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

With respect to claim 10,

Art Unit: 2166

Jochemsen discloses a method of defragmenting at least one storage medium coupled to a computer system, comprising:

- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, defragmenting the file (column 2 lines 58 – 67, Jochemsen);
- determining if defragmentation is complete if defragmentation is complete, deleting a location of the fragmented file clusters in a storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

With respect to claim 11,

Jochemsen discloses a computer program product for file defragmentation of at least one storage medium at least coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); computer code for storing locations of a plurality of file fragments when the system monitor has at least determined that file

Art Unit: 2166

fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, computer code for defragmenting a file (column 2 lines 58 – 67, Jochemsen); computer code for determining if defragmentation is complete; if defragmentation is complete, computer code for deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, computer code for determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, computer code for reporting an error (column 3 lines 23 – 45, Jochemsen).

With respect to claim 13,

Jochemsen discloses a computer program product for defragmenting at least one storage medium coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 1 lines

Art Unit: 2166

- 49 – 58, Jochemsen); if the computer system is idle, computer code for defragmenting a file (column 2 lines 58 – 67, Jochemsen);
- computer code for determining if defragmentation is complete, if defragmentation is complete, computer code for deleting a location of the fragmented file clusters in a storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, computer code for determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, computer code for reporting an error (column 3 lines 23 – 45, Jochemsen).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Navneet
Navneet K. Ahluwalia
Examiner
Art Unit 2166

TM
2/28/07

Dated: 02/21/2007

Hosain
HOSAIN ALAM
ADVISORY PATENT EXAMINER